4.4

|   | Application No.   | Applicant(s)                    |  |
|---|---|---------------------------------|--|
| Notice of Allowability  | 10/626,090  | BROWN ET AL.                    |  |
|   | Examiner  | Art Unit                        |  |
|   | Ephrem Alemu  | 2821                            |  |
| The MAILING DATE of this communication appears on the cover sheet with the correspondence address All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.  |   |                                 |  |
| 1. This communication is responsive to <u>1-14-05</u> .   |   |                                 |  |
| 2. The allowed claim(s) is/are <u>1-21</u> .  |   |                                 |  |
| 3. The drawings filed on 24 July 2003 are accepted by the Examiner.   |   |                                 |  |
| 4. Acknowledgment is made of a claim for foreign priority una a) All b) Some* c) None of the:  1. Certified copies of the priority documents have 2. Certified copies of the priority documents have 3. Copies of the certified copies of the priority documents have International Bureau (PCT Rule 17.2(a)).  * Certified copies not received:  Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONM THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.   | been received.  been received in Application No  cuments have been received in this received in this received in this received. |                                 |  |
| 5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.  |   |                                 |  |
| <ul> <li>6. CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.</li> <li>(a) including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached</li> <li>1) hereto or 2) to Paper No./Mail Date</li> <li>(b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date</li> <li>Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).</li> <li>7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.</li> </ul> |   |                                 |  |
| Attachment(s)  1. Notice of References Cited (PTO-892)  2. Notice of Draftperson's Patent Drawing Review (PTO-948)  3. Information Disclosure Statements (PTO-1449 or PTO/SB/0 Paper No./Mail Date 1/14/05, 9/10/03- pg 2 of 2  4. Examiner's Comment Regarding Requirement for Deposit of Biological Material  Supervisory Patent Examiner Technology Center 2830  | 5.  Notice of Informal Paper No./Mail Dat Paper No./Mail Dat 7.  Examiner's Amendn 8.  Examiner's Stateme 9.  Other             | (PTO-413),<br>e<br>nent/Comment |  |

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#### **DETAILED ACTION**

## Allowable Subject Matter

### 1. Claims 1-21 are allowed.

The following is an examiner's statement of reasons for allowance: It is agreed that the prior art of record fail to teach or suggest, alone or in combination, the following limitations "selectively changing (controlling) at least one of a volume and a location (position) of the conductive fluid contained in at least one cavity having a fixed position for dynamically modifying at least one electrical characteristic of the electromagnetic horn antenna" in a manner claimed in claims 1 and 10; "wherein the selectively changing step further comprises changing a flare angle of the horn antenna" as claimed in claim 4; "wherein the selectively changing step further comprises changing at least a corrugation geometry of the horn antenna" as claimed in claim 6; "wherein the control system controls the volume of the conductive fluid to change a flare angle of the horn antenna" as claimed in claim 17; "wherein the control system controls the conductive fluid to change at least a corrugation geometry of the horn antenna" as claimed in claim 19; and "wherein the control system controls the conductive fluid to convert an inner conductive surface of the horn antenna from a smooth profile to a corrugated profile" as claimed in claim 21. It is for these reasons in combination with all the other limitations in the independent claims 1, 4, 6, 10, 17, 19 and 21, that claims 1-21 are allowable over prior art of record.

## Conclusion

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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# Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ephrem Alemu whose telephone number is (571) 272-1818. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don K. Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EA 2-07-05

Supervisory Patent Examiner Technology Center 2800